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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GRIFFIN, WALTER DEAN

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 07/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,949

Applicant(s)

DIDILLON ET AL.

Examiner

Walter D. Griffin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 and 23-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 and 23-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

In view of the submission of the certified translation of the foreign priority document, the rejections in view of the Podrebarac (US 6,444,118) reference is withdrawn. Also, the rejections under 35 USC 112, first paragraph, are also withdrawn in view of the amendment.

New rejections follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11, 12, 16-19, 21, 23-25, and 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carruthers et al. (US 3,691,066) in view of EP 0725126 A1.

The Carruthers reference discloses a process for selectively hydrogenating a diolefin-containing gasoline feed. The process comprises contacting the gasoline and hydrogen with a catalyst to produce a treated gasoline having a reduced amount of diolefins. The mercaptans present in the feed react with the olefins present in the feed to produce higher molecular weight sulfur compounds. See col. 2, lines 25-53.

The Carruthers reference does not disclose the separation of the hydrogenated gasoline into at least three fractions and then treating a fraction to remove sulfur and nitrogen. The Carruthers reference also does not disclose the presence of nitrogen or acetylenic compounds in the feed, and does not disclose catalytic reforming of an intermediate fraction.

The EP 0725126 A1 reference discloses the separation of a gasoline into multiple fractions and then separately treating the fractions based on the sulfur compounds present in the fractions to remove the sulfur compounds. The fractions are then blended. The reference also discloses gasoline fractions are typically reformed to increase the octane number of the gasoline. See the entire document.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Carruthers by separating the hydrogenated gasoline into various fractions and then treating the fractions as suggested by the EP reference because the sulfur content can be reduced while maintaining octane number.

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It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Carruthers by reforming any fraction as suggested by the EP reference because octane numbers will be increased.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Carruthers by utilizing a feed that contains acetylenic and nitrogen compounds because one would expect a feed that contains these compounds in addition to the disclosed compounds would be effectively treated in the process since this type of feed is similar chemically and physically to the disclosed feed.

Claims 13-15, 20, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carruthers et al. (US 3,691,066) in view of EP 0725126 A1 as applied to claim 11 above, and further in view of Cecil et al. (US 3,732,155).

The previously discussed references do not disclose the multiple treatments of fractions with a catalyst as in claims 13, 26, and 27 to decompose sulfur and does not disclose the percent hydrogenation of the olefins as in claim 14.

The Cecil reference discloses a process for desulfurizing a hydrocarbon stream comprising contacting the feed with a catalyst in two successive stages. See entire document.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the teaching of the previously discussed references by including a multiple stage desulfurization process as disclosed by Cecil because better hydrogen utilization and efficiency will be obtained.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the teachings of the previously discussed references by

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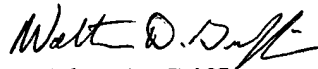
limiting the hydrogenation of olefins to levels as in claim 14 because olefins are a desired component of the final product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is 703-305-3774. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Walter D. Griffin
Primary Examiner
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WG
June 16, 2003